PHOTOGRAMMETRY ENGINE FOR MODEL CONSTRUCTION

ABSTRACT OF THE DISCLOSURE

A system and methods for accessing 2D digital images and 3D geometric models over a network (preferably the Internet) and transforming and composing that media along with 2D digital image and 3D geometric model media, acquired by other means, into enhanced 2D image and 3D model representations for virtual reality visualization and simulation is disclosed. Digital images and models from a network and other sources are incorporated and manipulated through an interactive graphical user interface. A photogrammetric media processing engine automatically extracts virtual sensor (camera) and geometric models from imagery. Extracted information is used by a reconstruction processor to automatically and realistically compose images and models. A rendering system provides real-time visualization and simulation of the constructed media. A client-server processing model for deployment of the media processing engine system over a network is disclosed.

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